

ABSTRACT

A fuel swirler positioned upstream of an injection orifice is disposed at the tip of a nozzle body in a fuel injector, in which the fixed core and the nozzle body are coupled to each other via a non-magnetic cylindrical seal ring press-fitted and welded to the outer circumference of one end on the nozzle body side of the fixed core and the inner circumference of one end of the nozzle body.

The inner circumference of the fuel swirler and the inner circumference of the seal ring function serve as a guide for slidably guiding a stroke movement of the needle. The fuel swirler is held between the receiving surface of the nozzle body and the orifice plate, thus defining an annular fuel passage between the outer circumference of the fuel swirler and the inner circumference of the nozzle body, so that fuel flows into a passage groove formed at the lower end surface of the fuel swirler via the annular fuel passage.

A mass movable in an axial direction independently of the needle is interposed between the return spring and the needle, and a plate spring is interposed between the mass and the needle.